

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: SADDLE BILLET (6061)	
Job Number	: 33680			
Estimate Number	: 11985			
P.O. Number	: N/A	Part Number	: D6102005	
This Issue	: 7/19/2007	S.O. No.	: N/A	
Prsht Rev.	: NC	Drawing Number	: D6102 REV D	
First Issue	: N/A	Project Number	: N/A	
Previous Run	: N/A	Drawing Revision	: D	
		Material	: N/A	
Written By	: <u>[Signature]</u>	Due Date	: 8/3/2007	Qty: <u>6</u> Um: Each
Checked & Approved By	: <u>[Signature]</u>			
Comment	: Est. B 01.10.11 Changed Measurement of Material and			
	: Added Inspection Level 21 SM			

Job Number:



1.0

PG

PURCHASING



Comment: Issue P/O: 4230 *C2021021*

- a) Description: Aluminum billet
- b) 47.85" x 15.25" x 1.0" thick
- c) Tolerance on all dimensions are +0.006"/-0.000"
- d) Grain direction along 47.85" length
- e) Material: 6061-T6/T651 (QQ-A-250/11) or (QQ-A-200/8)

Material certification required

2.0

D6102005P

Billet 1X15.25X48"



Comment: Qty.: 1.0000 Each(s)/Unit Total: 24.0000 Each(s)
Billet 1X15.25X48"

3.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Receive & Inspect For Transit Damage
Ensure material certification is attached

40

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK
Check certification to Dwg D6102 for compliance

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: 12 Date: 07/08/10
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 7/19/2007 2:28:05 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SADDLE BILLET (6061)

Job Number: 33680

Part Number: D6102005

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

CL 7/10/10 (6)

6.0

QC21

FINAL INSPECTION/W/O RELEASE



(6)

Comment: FINAL INSPECTION/W/O RELEASE

7/10/10

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

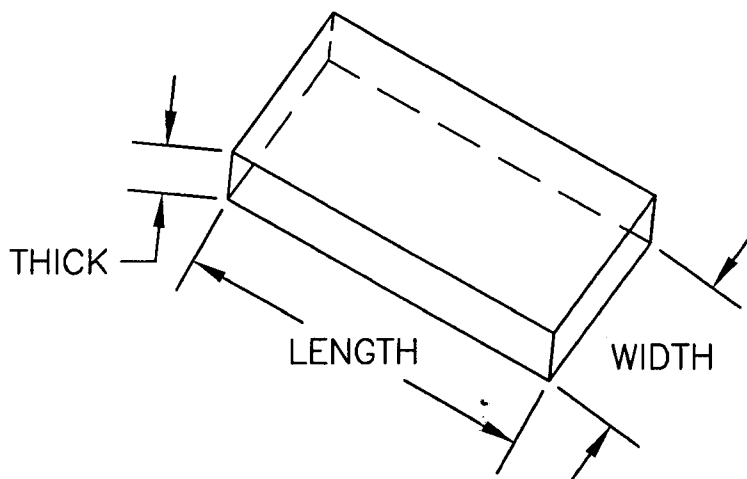
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN #	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CP	APPROVED #	DRAWING NO. D6102	Rev. D SHEET 1 OF 1
DATE 06.06.30		TITLE SADDLE BILLET, 6061	SCALE NTS
A	01.03.30	NEW ISSUE	
B	03.10.20	ADD D6102-005/-007/-009	
C	04.08.25	ADD D6102-010/-011	
D	06.06.30	ADD D6102-013	

SPECIFICATION CONTROL DRAWING



RELEASED
06.08.15 #

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.06/-0.00), AND GRAIN DIRECTION AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.06/-0.00.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6102-001	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.880	6.250	2.000	Along 7.880 Length
D6102-003	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.000	6.250	2.000	Along 6.000 Length
D6102-005	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	47.85	15.250	1.000	Along 47.85 Length
D6102-007	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.500	7.000	2.500	Along 7.500 Length
D6102-009	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	11.000	6.000	5.000	Along 11.000 Length
D6102-010	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.950	8.250	2.500	Along 7.950 Length
D6102-011	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	8.250	2.500	Along 6.500 Length
D6102-013	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	7.000	2.000	Along 6.500 Length

COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 33680

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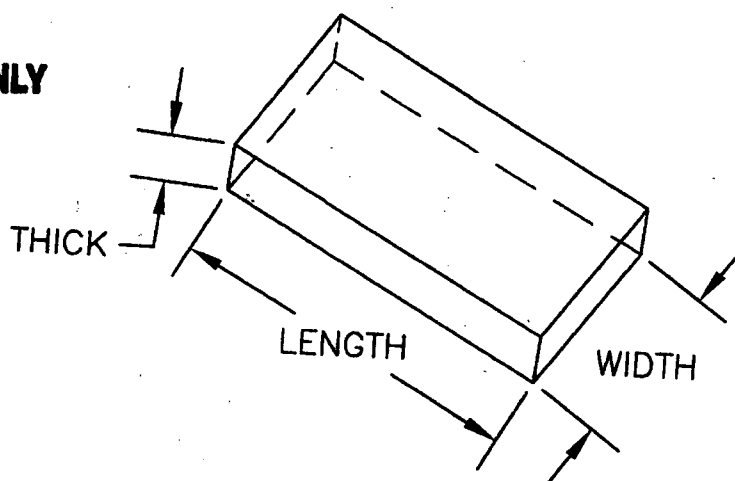
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DESIGN	<i>PH</i>	DRAWN BY	<i>PH</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>UP</i>	APPROVED	<i>PH</i>	DRAWING NO.	D6102
DATE				TITLE	SADDLE BILLET, 6061
06.06.30				Rev.	SHEET 1 OF
				SCALE	NT
A	01.03.30		NEW ISSUE		
B	03.10.20		ADD D6102-005/-007/-009		
C	04.08.25		ADD D6102-010/-011		
D	06.06.30		ADD D6102-013		

SPECIFICATION CONTROL DRAWING

REFERENCE ONLY



RELEASED

06.08.15 *PH*

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.06/-0.00), AND GRAIN DIRECTION AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.06/-0.00.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6102-001	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.880	6.250	2.000	Along 7.880 Length
D6102-003	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.000	6.250	2.000	Along 6.000 Length
D6102-005	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	47.85	15.250	1.000	Along 47.85 Length
D6102-007	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.500	7.000	2.500	Along 7.500 Length
D6102-009	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	11.000	6.000	5.000	Along 11.000 Length
D6102-010	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.950	8.250	2.500	Along 7.950 Length
D6102-011	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	8.250	2.500	Along 6.500 Length
D6102-013	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	7.000	2.000	Along 6.500 Length

554601 973339 01



A.M. CASTLE & Co. (Canada) Inc.

EXPÉDIÉ 08 AOUT 2007

11

T-413 P002/013 F-189

514-695-3281

FROM-métaux castle

10-08-'07 07:50

QUISION-CLIENT-CUSTOMER REQUISITION NO.		NO. COM. CLIENT-CUST. ORD. NO.		COMPT-ACCT.	VEND.-SLS	TERR.	EXPEDIE PAR-SHIP VIA		
		4230		91037	200	40	TRUCK	MANITOULA	
EUR-PURCHASING AGENT		TELEPHONE	HQ TAXE	NO. COM. ORD.	REGION LIVRAISON-DEL ZONE		F.A.B.-F.O.B.	BILL	NO. FEVILLE/EMBALLAGE-B/L NUMBER
NDA LACELLE		613 682-8936	9 0	1	C/C		PREPAID		
A-SHIP TO:		VENDU A-SOLD TO:				INFORMATION CRÉDIT-CRÉDIT INFORMATION			ROUTE
		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY ON K6A 1K7							01*NL-08/01 31-NL-05/01
UGCTIONS/LIVRAISON-DELIVERY		INSTRUCTIONS LIVRAISON (CONT.)-DELIVERY (CONT'D.)				INSTRUCTIONS LIVRAISON (CONT.)-DELIVERY (CONT'D.)			
Q-038568									
RIPTION - ITEM 1		PLATE 6061-T651 ALUM 15.25" X 47.85"				QTE/UNITE COM.-ORDERED			POIDS COM.-WT. ORDERED
		BLUE				6 PCS			439
CERTIFICAT DE CONFORMITE		INSTRUCTIONS				COULÉE INFO-HEAT INFO			QTE-QTY
See Packing Slip for English Certificate of Conformance		TOL: +.030" / -.000"				711246A9			
M. Castle & Co. (Canada) Inc. certifie que la material fourni après ce document rencontrera et est conforme aux spécifications du produit(s) décrit(s) ci-contre.		GRAIN TO RUN ALONG 47.85"							
A.M. Castle & Co. (Canada) Inc.		THICKNESS TOL.: +.030" / -.000"							
		PRIOR DIST/ORD: 01 973339							
AVIS POUR EXPEDITION SEULEMENT. VOIR FRACTURE SUR LE POID EXACT FRACTURE. SVP SIGNER ET RATER LA COPIE DU CHAUFFEUR POUR RÉCEPTION DU MATERIEL ET, SI VERIFIÉ, CERTIFICAT D'ANALYSE.						INSTRUCTIONS (CONT'D.)			ENT. 4
						6 X 15.25" X 47.85"			
RIPTION - ITEM 2						QTE/UNITE COM.-ORDERED			POIDS COM.-WT. ORDERED
TERMES ET CONDITIONS DE VENTES		INSTRUCTIONS				COULÉE INFO-HEAT INFO			QTE-QTY
DESABEU DES GARANTIES ET RESTRICTION DE RESPONSABILITE AU VERSO		1 SKID							
						INSTRUCTIONS (CONT'D.)			ENT. 4
RIPTION - ITEM 3						QTE/UNITE COM.-ORDERED			POIDS COM.-WT. ORDERED
NOTES DIFFÉRENCES OU DOMMAGES DOIVENT ÊTRE INDICUÉS SUR LA COPIE REQU/LIVRAISON ET LA FEUILLE D'EMBALLAGE ET SIGNÉ PAR LE CHAUFFEUR ET LE CLIENT. UNE COPIE DE CE REQU/EMENT INDICUÉ DOIT ÊTRE SOUMIS DANS LES 10 JOURS APRÈS QU'UN CRÉDIT EST REQUIS.		INSTRUCTIONS				COULÉE INFO-HEAT INFO			QTE-QTY
						INSTRUCTIONS (CONT'D.)			ENT. 4

RECUI/LIVRAISON - DELIVERY RECEIPT

04-25-'07 15:47 FROM-

T-413 P003/013 F-189

SHIP TO: AM CASTLE & CO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131
SOLD TO: AM CASTLE & CO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131

**KAISER
ALUMINUM**
 Trentwood Works - Spokane, WA 99215
 Phone: (800) 857-2535

CERTIFIED TEST REPORT
 Serial Number
 4094851

CUSTOMER PO NUMBER: 01-64880	WORK PACKAGE:	CUSTOMER PART NUMBER: 8822 AS8081-80	SNP RUNLOAD ID: 100958/18	GOVT CONTRACT NUMBER:
Kaiser Order NO: 1048133	LINE ITEM: 1	SNP DATE: 19-APR-2007	ALLOY: 6061	CLAD: BARE
WEIGHT SHIPPED: 4988 LB	QUANTITY: 7 PCS EST.	SNL NUMBER: 2012535	TEMPER: T651	PRODUCT DESCRIPTION: PRECISION PLATE
			DAMAGE: 1.0000 IN	WIDTH: 48.600 IN
				LENGTH: 144.600 IN

Certified Specifications
 AMS 4027/RevM
 ASTM B 209/Rev06

AMS-QQ-A-250/11

ASME BB 209/Rev2004

Test Code: 1511

Test Results

Lot: 28898A5 Cast 501

Drop 53

Ingot 1

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPa)	Yield KSI (MPa)	Elongation %
	T651	LT / 2 (Min/Max)	45.6 : 48.0 (314 : 317)	39.1 : 39.8 (270 : 274)	15.9 : 15.7

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.71	0.51	0.29	0.09	1.05	0.19	0.18	0.02	0.01	0.00	TOT 0.09

Lot: 71186A9 Cast 011

Drop 13

Ingot 2

Parent Lot: 291001A9

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPa)	Yield KSI (MPa)	Elongation %
	T651	LT / 2 (Min/Max)	47.6 : 47.7 (328 : 329)	43.3 : 45.4 (299 : 288)	14.0 : 14.5

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.73	0.47	0.29	0.05	1.08	0.17	0.07	0.03	0.01	0.00	TOT 0.08

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
6061 MIN	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remaninder

CASTLE METALS CORP.

 DATE RCVD 4/25/07
 IAC 8622
 APPROVED BY [Signature]

Page 1 of 2

10-08-07 07:51 FROM-metalex castle

514-695-3281

10-08-07 07:51 FROM-metalex castle

04-25-'07 15:47 FROM-

T-400 P010/035 F-317

KAISER
ALUMINUM

Tranbwood Works - Spokane, WA 99215
Phone: (800) 367-2588

CERTIFIED TEST REPORT

Serial Number
4094851

CERTIFICATION

Kaiser Aluminum Chemical Corporation (Kaiser) hereby certifies that metal shipped under this order was melted and manufactured in the USA and has been inspected, tested, and found in conformance with the requirements of the applicable specifications as indicated herein. All metal which is sold with heat-treated condition complies with and meets. Any discrepancy is limited to that shown on Kaiser's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced without the full, printed and written approval of Kaiser Aluminum & Chemical Corporation Laboratory. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under Federal Law, 182-20012200 CARTRIDGE.

BILL POYNOR, LABORATORIES SUPERVISOR

